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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,201	10/31/2003	Mark F. Ellis	58836US003	9990

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EXAMINER

JOLLEY, KIRSTEN

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,201

Applicant(s)

ELLIS ET AL.

Examiner

Kirsten C. Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/6/04, 3/1/04, 3/7/
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Group I, claims 1-15, in the reply filed on February 20, 2006 is acknowledged. The traversal is on the ground(s) that the claims of Groups I and II, and I and III, are so interrelated that a search of one group of claims will reveal art to the other, and that a separate examination of the claims in Groups I and II and III would require substantial duplication of work on the part of the USPTO. This is not found persuasive because the considerations used for examining method claims are different than those used for examining composition and product claims. Product claims and composition claims are examined based on the properties of the final article produced or on the specific composition, respectively, not on the method used to create the product or the method in which the composition is used. It is the Examiner's position that there is a burden based on the different issues that arise in examining method claims versus product or composition claims. Further, the searches for the different classes of invention are not necessarily the same. When examining a claim directed to a method of coating, it is necessary to find the process steps of the coating method. However, when examining claims directed to a coated product, the applicable art includes art directed to Applicant's coated substrate produced by any method that would reasonably yield the same product (for example, a tape made using thermal curing instead of actinic curing or using a single polymerization step). When examining claims directed to a coating composition, applicable art includes compositions used in any method (for example, compositions that are not subsequently coated on a substrate or subsequently polymerized by actinic radiation). Applicable art for a

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method of coating do not necessarily encompass all the fields of search required for product and composition claims and therefore there is an additional burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 does not further limit claim 1.
3. Claim 4 is objected to because of the following informalities: The period is missing at the end of claim 4. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, the phrase “essentially solvent-free” is vague and indefinite because the metes and bounds of this phrase are not known and do not appear to be concretely defined in the specification.

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Claims 5, 7, and 14 are vague and indefinite because they contain improper Markush language. The Examiner suggests changing "selected from a group comprising" to --selected from a group consisting of--.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis (US 5,637,646).

Ellis discloses a method of preparing a pressure-sensitive adhesive comprising the steps of: (i) providing an essentially solvent-free mixture comprising free radically polymerizable monomers and at least one free-radical polymerization initiator; (ii) partially polymerizing the mixture to provide a partially polymerized mixture having a polymer content of 30-80% (col. 17, line 52 to col. 18, line 10); (iii) adding additional initiator to the partially polymerized mixture (col. 18, lines 37-38); (iv) applying the mixture to a substrate (col. 19, lines 25-28); and (v) further polymerizing by subjecting the coated precursor to actinic irradiation to provide said PSA (col. 19, lines 30-33).

Ellis does not specifically state that a degree of conversion of monomers to polymer is between 30-60 wt % with respect to the initial mass of the monomers prior to polymerization. However, Ellis teaches that polymerization is stopped prior to full 100% conversion, and that at

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the time of stopping polymerization the polymer content is typically about 30-80 wt % based on the total weight of monomer and polymer (col. 17, lines 46-51 and col. 18, lines 9-10). It is the Examiner's position that the extent of monomer conversion in Ellis' process overlaps the claimed range of monomer conversion. Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Ellis' monomer conversion amount range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974). Further, it is the Examiner's position that for this reason, and because Ellis uses similar materials and process steps, Ellis' Brookfield viscosity would similarly fall within the claimed range.

As to claims 2 and 4, Ellis teaches that the partial polymerization is performed under adiabatic conditions, and that the free-radical polymerization initiators are thermally activatable initiators.

As to claim 5, Ellis teaches the claimed free-radical polymerization initiators in col. 12, lines 28-44. As to claim 6, Ellis teaches that the amount of free-radical polymerization initiator is within the range of 0.0005-0.5 wt % (col. 13, lines 11-13). As to claims 7-8, Ellis teaches that "Different, or additional, initiators may be necessary" (col. 16, lines 8):

As to claims 9-10, Ellis is silent with regard to the polydispersity values. It is the Examiner's position that the polydispersity values of Ellis would fall within the claimed range, or overlap the claimed range, since the process of Ellis and the instant invention use similar materials and similar process steps.

As to claim 11, Ellis does not state that the UV curing occurs in an inert atmosphere (col. 19, lines 30-52), therefore it would have been obvious to one skilled in the art to have performed the UV curing in a non-inert atmosphere for economic and efficiency reasons.

As to claims 14-15, Ellis teaches coating on a polymeric substrate.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Karim et al. (US 5,721,289) is cited for its teaching of using a free radically polymerizable syrup that is partially polymerized with 1-30% monomer conversion, and subsequent actinic radiation curing after coating (col. 12, lines 32-36, and col. 18).

Heilmann et al. (US 4,379,201) discloses partially polymerizing its mixture containing free radically polymerizable monomers and free-radical polymerization initiator to a viscosity of 300-20,000 centipoise (col. 3, lines 46-51). It is the Examiner's position that a viscosity of 20,000 centipoise would result in monomer conversion in the claimed range.

Martin et al. (US 5,028,484) similarly discloses partially polymerizing to a viscosity of 500-50,000 cps (col. 8, lines 25-27).


Welke et al. (US 2004/0137222) and Graichen et al. (US 2005/0209360) are cited to show the state of the art related to the instant invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C. Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Wednesday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirsten C Jolley
Primary Examiner
Art Unit 1762

kcj